

Food and Drug Administration College Park, MD 20740

# JUL 28 2005

0069 5 SEP 21 P2:48

Sin Hang Lee, MD Fleminger, Inc. 160 Hawley Lane, Suite 205 Trumbull, CT 06611

RE: Qualified Health Claim Petition: Green Tea and Reduced Risk of Cancer (Docket No. 2004Q-0083)

### Dear Dr. Lee:

Thank you for your letters dated July 1, July 5, and July 6, 2005, in reference to the June 30, 2005, letter from the Food and Drug Administration (FDA or the agency) regarding your health claim petition dated January 17, 2004, as supplemented by your letter dated May 21, 2004.

While your recent letters do not meet the requirements for a health claim petition pursuant to 21 C.F.R. 101.70 and do not state that you are requesting reconsideration under 21 C.F.R. 10.33, we believe that you appear to be seeking reconsideration.

We ask that you please review the requirements of 21 C.F.R. 10.33 (copy enclosed). If you would like the agency to reconsider its June 30, 2005, determination concerning your health claim petition, please submit a request for reconsideration in accordance with 21 C.F.R. 10.33.

Please note that if you wish to rely on information or views not previously included in the record of your January 17, 2004, petition (as supplemented by your letter dated May 21, 2004), you would need to submit a new petition, rather than seeking only reconsideration (see 21 C.F.R. 10.33(e)).

Finally, with respect to the request in your July 1, 2005, letter that the agency notify you within ten days, please note that there is no statutory or regulatory requirement that the agency respond to a request for reconsideration within ten days. If you submit a request for reconsideration in

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accordance with 21 C.F.R. 10.33, once a decision on that request has been made, we will communicate the decision to you promptly in writing. If you submit a new petition under 21 C.F.R. 101.70 (copy enclosed) time periods specified in that regulation for agency action on such petitions would apply.

Sincerely yours

Barbara O. Schneeman, Ph.D.

Director

Office of Nutritional Products, Labeling, and Dietary Supplements

Center for Food Safety and Applied Nutrition

# Enclosures:

1) 21 C.F.R. 10.33

2) 21 C.F.R. 101.70

### § 10.33

- (h) In reviewing a petition the Commissioner may use the following procedures:
- (1) Conferences, meetings, discussions, and correspondence under § 10.65.
- (2) A hearing under parts 12, 13, 14, 15, or 16
- (3) A FEDERAL REGISTER notice requesting information and views.
- (4) A proposal to issue, amend, or revoke a regulation, in accordance with §10.40 or §12.20.
- (5) Any other specific public procedure established in this chapter and expressly applicable to the matter.
- (i) The record of the administrative proceeding consists of the following:
- (1) The petition, including all information on which it relies, filed by the Division of Dockets Management.
- (2) All comments received on the petition, including all information submitted as a part of the comments.
- (3) If the petition resulted in a proposal to issue, amend, or revoke a regulation, all of the documents specified in §10.40(g).
- (4) The record, consisting of any transcripts, minutes of meetings, reports, FEDERAL REGISTER notices, and other documents resulting from the optional procedures specified in paragraph (h) of this section, except a transcript of a closed portion of a public advisory committee meeting.
- (5) The Commissioner's decision on the petition, including all information identified or filed by the Commissioner with the Division of Dockets Management as part of the record supporting the decision.
- (6) All documents filed with the Division of Dockets Management under §10.65(h).
- (7) If a petition for reconsideration or for a stay of action is filed under paragraph (j) of this section, the administrative record specified in §10.33(k) or §10.35(h).
- (j) The administrative record specified in paragraph (i) of this section is the exclusive record for the Commissioner's decision. The record of the administrative proceeding closes on the date of the Commissioner's decision unless some other date is specified. Thereafter any interested person may submit a petition for reconsideration under § 10.33 or a petition for stay of ac-

tion under §10.35. A person who wishes to rely upon information or views not included in the administrative record shall submit them to the Commissioner with a new petition to modify the decision in accordance with this section.

- (k) This section does not apply to the referral of a matter to a United States attorney for the initiation of court enforcement action and related correspondence, or to requests, suggestions, and recommendations made informally in routine correspondence received by FDA. Routine correspondence does not constitute a petition within the meaning of this section unless it purports to meet the requirements of this section. Action on routine correspondence does not constitute final administrative action subject to judicial review under §10.45.
- (1) The Division of Dockets Management will maintain a chronological list of each petition filed under this section and §10.85, but not of petitions submitted elsewhere in the agency under §10.25(a)(1), showing:
  - (1) The docket number;
- (2) The date the petition was filed by the Division of Dockets Management;
  - (3) The name of the petitioner;
  - (4) The subject matter involved; and
  - (5) The disposition of the petition.

[44 FR 22323, Apr. 13, 1979, as amended at 46 FR 8455, Jan. 27, 1981; 50 16656, Apr. 26, 1985; 54 FR 9034, Mar. 3, 1989; 57 FR 17980, Apr. 28, 1992; 59 FR 14364, Mar. 28, 1994; 62 FR 40592, July 29, 1997; 66 FR 6467, Jan. 22, 2001; 66 FR 12848, Mar. 1, 2001]

# § 10.33 Administrative reconsideration of action.

- (a) The Commissioner may at any time reconsider a matter, on the Commissioner's own initiative or on the petition of an interested person.
- (b) An interested person may request reconsideration of part or all of a decision of the Commissioner on a petition submitted under §10.25. Each request for reconsideration must be submitted in accordance with §10.20 and in the following form no later than 30 days after the date of the decision involved. The Commissioner may, for good cause, permit a petition to be filed after 30 days. In the case of a decision published in the FEDERAL REGISTER, the

day of publication is the day of decision.

(Date)

Division of Dockets Management, Food and Drug Administration, Department of Health and Human Services, rm. 1-23, 5630 Fishers Lane, rm. 1061, Rockville, MD 20852.

#### PETITION FOR RECONSIDERATION

#### [Docket No.]

The undersigned submits this petition for reconsideration of the decision of the Commissioner of Food and Drugs in Docket No.

#### A. Decision involved

(A concise statement of the decision of the Commissioner which the petitioner wishes to have reconsidered.)

### B. Action requested

(The decision which the petitioner requests the Commissioner to make upon reconsideration of the matter.)

#### C. Statement of grounds

(A full statement, in a well-organized format, of the factual and legal grounds upon which the petitioner relies. The grounds must demonstrate that relevant information and views contained in the administrative record were not previously or not adequately considered by the Commissioner.

(No new information or views may be included in a petition for reconsideration.)

(Signature)	
(Name of petitioner)	
(Mailing address)	
(Telephone number)	

- (c) A petition for reconsideration relating to a petition submitted under \$10.25(a)(2) is subject to the requirements of \$10.30 (c) and (d), except that it is filed in the same docket file as the petition to which it relates.
- (d) The Commissioner shall promptly review a petition for reconsideration. The Commissioner may grant the petition when the Commissioner determines it is in the public interest and in the interest of justice. The Commissioner shall grant a petition for reconsideration in any proceeding if the Commissioner determines all of the following apply:
- (1) The petition demonstrates that relevant information or views contained in the administrative record were not previously or not adequately considered.

- (2) The petitioner's position is not frivolous and is being pursued in good faith.
- (3) The petitioner has demonstrated sound public policy grounds supporting reconsideration.
- (4) Reconsideration is not outweighed by public health or other public interests.
- (e) A petition for reconsideration may not be based on information and views not contained in the administrative record on which the decision was made. An interested person who wishes to rely on information or views not included in the administrative record shall submit them with a new petition to modify the decision under §10.25(a).
- (f) The decision on a petition for reconsideration is to be in writing and placed on public display as part of the docket file on the matter in the office of the Division of Dockets Management. A determination to grant reconsideration will be published in the FEDERAL REGISTER if the Commissioner's original decision was so published. Any other determination to grant or deny reconsideration may also be published in the FEDERAL REGISTER.
- (g) The Commissioner may consider a petition for reconsideration only before the petitioner brings legal action in the courts to review the action, except that a petition may also be considered if the Commissioner has denied a petition for stay of action and the petitioner has petitioned for judicial review of the Commissioner's action and requested the reviewing court to grant a stay pending consideration of review. petition for reconsideration submitted later than 30 days after the date of the decision involved will be denied as untimely unless the Commissioner permits the petition to be filed after 30 days. A petition for reconsideration will be considered as submitted on the day it is received by the Division of Dockets Management.
- (h) The Commissioner may initiate the reconsideration of all or part of a matter at any time after it has been decided or action has been taken. If review of the matter is pending in the courts, the Commissioner may request that the court refer the matter back to

the agency or hold its review in abeyance pending administrative reconsideration. The administrative record of the proceeding is to include all additional documents relating to such reconsideration.

(i) After determining to reconsider a matter, the Commissioner shall review and rule on the merits of the matter under §10.30(e). The Commissioner may reaffirm, modify, or overrule the prior decision, in whole or in part, and may grant such other relief or take such other action as is warranted.

(j) The Commissioner's reconsideration of a matter relating to a petition submitted under §10.25(a)(2) is subject to §10.30 (f) through (h), (j), and (k).

(k) The record of the administrative proceeding consists of the following:

(1) The record of the original petition specified in § 10.30(i).

(2) The petition for reconsideration, including all information on which it relies, filed by the Division of Dockets Management.

(3) All comments received on the petition, including all information submitted as a part of the comments.

- (4) The Commissioner's decision on the petition under paragraph (f) of this section, including all information identified or filed by the Commissioner with the Division of Dockets Management as part of the record supporting the decision.
- (5) Any FEDERAL REGISTER notices or other documents resulting from the petition.
- (6) All documents filed with the Division of Dockets Management under §10.65(h).
- (7) If the Commissioner reconsiders the matter, the administrative record relating to reconsideration specified in §10.30(i).

[44 FR 22323, Apr. 13, 1979, as amended at 46 FR 8455, Jan. 27, 1981; 59 FR 14364, Mar. 28, 1994; 66 FR 6467, Jan. 22, 2001; 66 FR 12848, Mar. 1, 2001]

### § 10.35 Administrative stay of action.

- (a) The Commissioner may at any time stay or extend the effective date of an action pending or following a decision on any matter.
- (b) An interested person may request the Commissioner to stay the effective date of any administrative action. A

stay may be requested for a specific time period or for an indefinite time period. A request for stay must be submitted in accordance with §10.20 and in the following form no later than 30 days after the date of the decision involved. The Commissioner may, for good cause, permit a petition to be filed after 30 days. In the case of a decision published in the FEDERAL REGISTER, the day of publication is the date of decision.

(Date)

Division of Dockets Management, Food and Drug Administration, Department of Health and Human Services, 5630 Fishers Lane, rm. 1061, Rockviile, MD 20652.

## PETITION FOR STAY OF ACTION

The undersigned submits this petition requesting that the Commissioner of Food and Drugs stay the effective date of the following matter.

#### A. Decision involved

(The specific administrative action being taken by the Commissioner for which a stay is requested, including the docket number or other citation to the action involved.)

# B. Action requested

(The length of time for which the stay is requested, which may be for a specific or indefinite time period.)

# C. Statement of grounds

(A full statement, in a well-organized format, of the factual and legal grounds upon which the petitioner relies for the stay.)

(Signature)	
(Name of petitioner) (Mailing address)	*
(Telephone number)	

- (c) A petition for stay of action relating to a petition submitted under §10.25(a)(2) is subject to the requirements of §10.30 (c) and (d), except that it will be filed in the same docket file as the petition to which it relates.
- (d) Neither the filing of a petition for a stay of action nor action taken by an interested person in accordance with any other administrative procedure in this part or in any other section of this chapter, e.g., the filing of a citizen petition under \$10.30 or a petition for reconsideration under \$10.33 or a request for an advisory opinion under \$10.85,

statement should provide examples of the types of foods on which the brand name will appear. It shall also include data showing that the actual level of the nutrient in the food qualifies the food to bear the corresponding term defined by regulation. Assay methods used to determine the level of a nutrient should meet the requirements stated under petition format item C in paragraph (k)(1) of this section.

B. A detailed explanation, supported by any necessary data, of why use of the proposed brand name is requested. This item shall also state what nutritional benefit to the public will derive from use of the brand name as proposed. If the branded product is intended for a specific group within the population, the analysis should specifically address nutritional needs of such group and should include scientific data sufficient for such purpose.

C. The petitioner is required to submit either a claim for categorical exclusion under § 25.30 or § 25.32 of this chapter or an environmental assessment under § 25.40 of this chapter

(2) Within 15 days of receipt of the petition the petitioner will be notified by letter of the date on which the petition was received. Such notice will inform the petitioner:

(i) That the petition is undergoing agency review (in which case a docket number will be assigned to the petition); or

(ii) That the petition is incomplete, e.g., it lacks any of the data required by this part, it presents such data in a manner that is not readily understood, or it has not been submitted in quadruplicate, in which case the petition will be denied, and the petitioner will be notified as to what respect the petition is incomplete.

(3) FDA will publish a notice of the petition in the FEDERAL REGISTER announcing its availability to the public and seeking comment on the petition. The petition shall be available to the public to the extent provided under paragraph (g) of this section. The notice shall allow 30 days for comments.

(4) Within 100 days of the date of receipt of the petition that is accepted for review (i.e., that has not been found to be incomplete and subsequently returned to the petitioner), FDA will:

(i) Notify the petitioner by letter of the agency's decision to grant the petitioner permission to use the proposed brand name if such use is not misleading, with any conditions or limitations on such use specified; or

(ii) Deny the petition, in which case the letter shall state the reasons therefor. Failure of the petition to fully address the requirements of this section shall be grounds for denial of the petition. Should FDA not notify the petitioner of his decision on the petition within 100 days, the petition shall be considered to be granted.

(5) As soon as practicable following the granting of a petition, the Commissioner of Food and Drugs will publish a notice in the FEDERAL REGISTER informing the public of such fact.

[58 FR 2413, Jan. 6, 1993; 58 FR 17343, Apr. 2, 1993, as amended at 58 FR 44033, Aug. 18, 1993; 62 FR 40598, July 29, 1997; 63 FR 26718, May 14, 1998; 63 FR 40024, July 27, 1998; 67 FR 9585, Mar. 4, 2002; 69 FR 16481, Mar. 30, 2004]

# Subpart E—Specific Requirements for Health Claims

## § 101.70 Petitions for health claims.

(a) Any interested person may petition the Food and Drug Administration (FDA) to issue a regulation regarding a health claim. An original and one copy of the petition shall be submitted, or the petitioner may submit an original and a computer readable disk containing the petition. Contents of the disk should be in a standard format, such as ASCII format. (Petitioners interested in submitting a disk should contact the Center for Food Safety and Applied Nutrition for details.) If any part of the material submitted is in a foreign language, it shall be accompanied by an accurate and complete English translation. The petition shall state the petitioner's post office address to which any correspondence required by section 403 of the Federal Food, Drug, and Cosmetic Act may be

(b) Pertinent information may be incorporated in, and will be considered as part of, a petition on the basis of specific reference to such information submitted to and retained in the files of FDA. Such information may include any findings, along with the basis of the findings, of an outside panel with

expertise in the subject area. Any reference to published information shall be accompanied by reprints, or easily readable copies of such information.

(c) If nonclinical laboratory studies are included in a petition, the petition shall include, with respect to each nonclinical study contained in the petition, either a statement that the study has been conducted in compliance with the good laboratory practice regulations as set forth in part 58 of this chapter, or, if any such study was not conducted in compliance with such regulations, a brief statement of the reason for the noncompliance.

(d) If clinical or other human investigations are included in a petition, the petition shall include a statement that they were either conducted in compliance with the requirements for institutional review set forth in part 56 of this chapter, or were not subject to such requirements in accordance with \$56.104 or \$56.105, and a statement that they were conducted in compliance with the requirements for informed consent set

forth in part 50 of this chapter.

(e) All data and information in a health claim petition are available for public disclosure after the notice of filing of petition is issued to the petitioner, except that clinical investigation reports, adverse reaction reports, product experience reports, consumer complaints, and other similar data and information shall only be available after deletion of:

(1) Names and any information that would identify the person using the product.

(2) Names and any information that would identify any third party involved with the report, such as a physician or hospital or other institution.

(f) Petitions for a health claim shall include the following data and be submitted in the following form:

(Date)
Name of petitioner
Post office address
Subject of the petition
Food and Drug Administration,
Office of Nutritional Products, Labeling and
Dietary Supplements (HFS-800),
5100 Paint Branch Pkwy.,
College Park, MD 20740,

The undersigned, submits this petition pursuant to section 403(r)(4) or 403(r)(5)(D) of the Federal Food, Drug, and

Cosmetic Act with respect to (statement of the substance and its health claim).

Attached hereto and constituting a port of

Attached hereto, and constituting a part of this petition, are the following:

A. Preliminary requirements. A complete explanation of how the substance conforms to the requirements of \$101.14(b) (21 GFR 101.14(b)). For petitions where the subject substance is a food ingredient or a component of a food ingredient, the petitioner should compile a comprehensive list of the specific ingredients that will be added to the food to supply the substance in the food bearing the health claim. For each such ingredient listed, the petitioner should state how the ingredient complies with the requirements of \$101.14(b)(3)(ii), e.g., that its use is generally recognized as safe (GRAS), listed as a food additive, or authorized by a prior sanction issued by the agency, and what the basis is for the GRAS claim, the food additive status, or prior sanctioned status.

B. Summary of scientific data. The summary of scientific data provides the basis upon which authorizing a health claim can be justified as providing the health benefit. The summary must establish that, based on the totality of publicly available scientific evidence (including evidence from well-designed studies conducted in a manner which is consistent with generally recognized scientific procedures and principles), there is significant scientific agreement among experts qualified by scientific training and experience to evaluate such claims, that the claim is supported by such evidence.

The summary shall state what public health benefit will derive from use of the claim as proposed. If the claim is intended for a specific group within the population, the summary shall specifically address nutritional needs of such group and shall include scientific data showing how the claim is likely to assist in meeting such needs.

The summary shall concentrate on the findings of appropriate review articles, National Institutes of Health consensus development conferences, and other appropriate resource materials. Issues addressed in the summary shall include answers to such questions as:

1. Is there an optimum level of the particular substance to be consumed beyond which no benefit would be expected?

2. Is there any level at which an adverse effect from the substance or from foods containing the substance occurs for any segment of the population?

3. Are there certain populations that must receive special consideration?

4. What other nutritional or health factors (both positive and negative) are important to consider when consuming the substance?

In addition, the summary of scientific data shall include a detailed analysis of the potential effect of the use of the proposed claim on food consumption, specifically any change due to significant alterations in eating habits and corresponding changes in nutrient intake resulting from such changes in food consumption. The latter item shall specifically address the effect on the intake of nutrients that have beneficial and negative consequences in the total diet.

If the claim is intended for a significant subpopulation within the general U.S. population, the analysis shall specifically address the dietary practices of such group, and shall include data sufficient to demonstrate that the dietary analysis is representative of such group (e.g., adolescents or the elderly):

If appropriate, the petition shall explain the prevalence of the disease or health-related condition in the U.S. population and the relevance of the claim in the context of the total daily diet.

Also, the summary shall demonstrate that the substance that is the subject of the proposed claim conforms to the definition of the term "substance" in §101.14(a)(2).

- C. Analytical data that show the amount of the substance that is present in representative foods that would be candidates to bear the claim should be obtained from representative samples using methods from the Association of Official Analytical Chemists (AOAC), where available. If no AOAC method is available, the petitioner shall submit the assay method used and data establishing the validity of the method for assaying the substance in food. The validation data should include a statistical analysis of the analytical and product variability.
- D. Model health claim. One or more model health claims that represent label statements that may be used on a food label or in labeling for a food to characterize the relationship between the substance in a food to a disease or health-related condition that is justified by the summary of scientific data provided in section C of the petition. The model health claim shall include:
- A brief capsulized statement of the relevant conclusions of the summary, and
- 2. A statement of how this substance helps the consumer to attain a total dietary pattern or goal associated with the health benefit that is provided. E. The petition shall include the following
- E. The petition shall include the following attachments:
- 1. Copies of any computer literature searches done by the petitioner (e.g., Medline).
- Copies of articles cited in the literature searches and other information as follows:
- a. All information relied upon for the support of the health claim, including copies of publications or other information cited in review articles and used to perform meta-anal-
- b. All information concerning adverse consequences to any segment of the population (e.g., sensitivity to the substance).

c. All information pertaining to the U.S. population.

F. The petitioner is required to submit either a claim for categorical exclusion under \$25.30 or \$25.32 of this chapter or an environmental assessment under \$25.40 of this chapter.

Yours very truly,
Petitioner
By
(Indicate authority)

(g) The data specified under the several lettered headings should be submitted on separate pages or sets of pages, suitably identified. If such data have already been submitted with an earlier application from the petitioner or any other final petition, the present petition may incorporate it by specific reference to the earlier petition.

(h) The petition shall include a statement signed by the person responsible for the petition that, to the best of his/her knowledge, it is a representative and balanced submission that includes unfavorable information as well as favorable information, known to him/her to be pertinent to the evaluation of the proposed health claim.

(i) The petition shall be signed by the petitioner or by his/her attorney or agent, or (if a corporation) by an authorized official.

(i) Agency action on the petition. (1) Within 15 days of receipt of the petition, the petitioner will be notified by letter of the date on which the petition was received. Such notice will inform the petitioner that the petition is undergoing agency review and that the petitioner will subsequently be notified of the agency's decision to file for comprehensive review or deny the petition.

(2) Within 100 days of the date of receipt of the petition, FDA will notify the petitioner by letter that the petition has either been filed for comprehensive review or denied. The agency will deny a petition without reviewing the information contained in "B. Summary of Scientific Data" if the information in "A. Preliminary Requirements" is inadequate in explaining how the substance conforms to the requirements of §101.14(b). If the petition is denied, the notification will state the reasons therefor, including justification of the rejection of any report from an authoritative scientific body of the U.S. Government. If filed, the date of the notification letter becomes the date of filing for the purposes of this regulation. If FDA does not act within such 100 days, the petition shall be deemed to be denied unless an extension is mutually agreed upon by FDA and the petitioner. A petition that has been denied, or has been deemed to be denied, without filing will not be made available to the public. A filed petition will be available to the public to the extent provided under paragraph (e) of this section.

- (3) Within 90 days of the date of filing, FDA will by letter of notification to the petitioner:
  - (i) Deny the petition, or
- (ii) Inform the petitioner that a proposed regulation to provide for the requested use of the health claim will be published in the FEDERAL REGISTER. If the petition is denied, the notification will state the reasons therefor, including justification for the rejection of any report from an authoritative scientific body of the U.S. Government. FDA will publish the proposal to amend the regulations to provide for the requested use of the health claim in the FEDERAL REGISTER within 90 days of the date of filing. The proposal will also announce the availability of the petition for public review.
- (iii) If FDA does not act within 90 days of the date of filing, the petition shall be deemed to be denied unless an extension is mutually agreed upon by FDA and the petitioner.
- (4)(i) Within 270 of the date of publication of the proposal, FDA will publish a final rule that either authorizes use of the health claim or explains why the agency has decided not to authorize one.
- (ii) For cause, FDA may extend, no more than twice, the period in which it will publish a final rule; each such extension will be for no more than 90 days. FDA will publish a notice of each extension in the FEDERAL REGISTER. The document will state the basis for the extension, the length of the extension, and the date by which the final rule will be published, which date shall

be within 540 days of the date of receipt of the petition.

[58 FR 2534, Jan. 6, 1993; 58 FR 17097, Apr. 1, 1993, as amended at 59 FR 425, Jan. 4, 1994; 62 FR 28232, May 22, 1997; 62 FR 40599, July 29, 1997; 63 FR 26719, May 14, 1998; 63 FR 40024, July 27, 1998; 66 FR 56035, Nov. 6, 2001]

# § 101.71 Health claims: claims not authorized.

Health claims not authorized for foods in conventional food form or for dietary supplements of vitamins, minerals, herbs, or other similar substances:

- (a) Dietary fiber and cardiovascular disease.
- (b) Zinc and immune function in the elderly.

[58 FR 2534, Jan. 6, 1993, as amended at 58 FR 2548, 2578, 2620, 2639, 2664, 2714, Jan. 6, 1993; 58 FR 17100, Apr. 1, 1993; 59 FR 437, Jan. 4, 1994; 65 FR 58918, Oct. 3, 2000]

# § 101.72 Health claims: calcium and osteoporosis.

(a) Relationship between calcium and osteoporosis. An inadequate calcium intake contributes to low peak bone mass and has been identified as one of many risk factors in the development of osteoporosis. Peak bone mass is the total quantity of bone present at maturity, and experts believe that it has the greatest bearing on whether a person at risk of developing will be osteoporosis and related bone fractures later in life. Another factor that influences total bone mass and susceptibility to osteoporosis is the rate of bone loss after skeletal maturity. An adequate intake of calcium is thought to exert a positive effect during adolescence and early adulthood in optimizing the amount of bone that is laid down. However, the upper limit of peak bone mass is genetically determined. The mechanism through which an adequate calcium intake and optimal peak bone mass reduce the risk osteoporosis is thought to be as follows. All persons lose bone with age. Hence, those with higher bone mass at maturity take longer to reach the critically reduced mass at which bones can fracture easily. The rate of bone loss after skeletal maturity also influences the amount of bone present at